

HIV Prevalence and Unrecognized Infection among Men Who Have Sex With Men in Chicago

Chicago HIV Behavioral Surveillance - 2008



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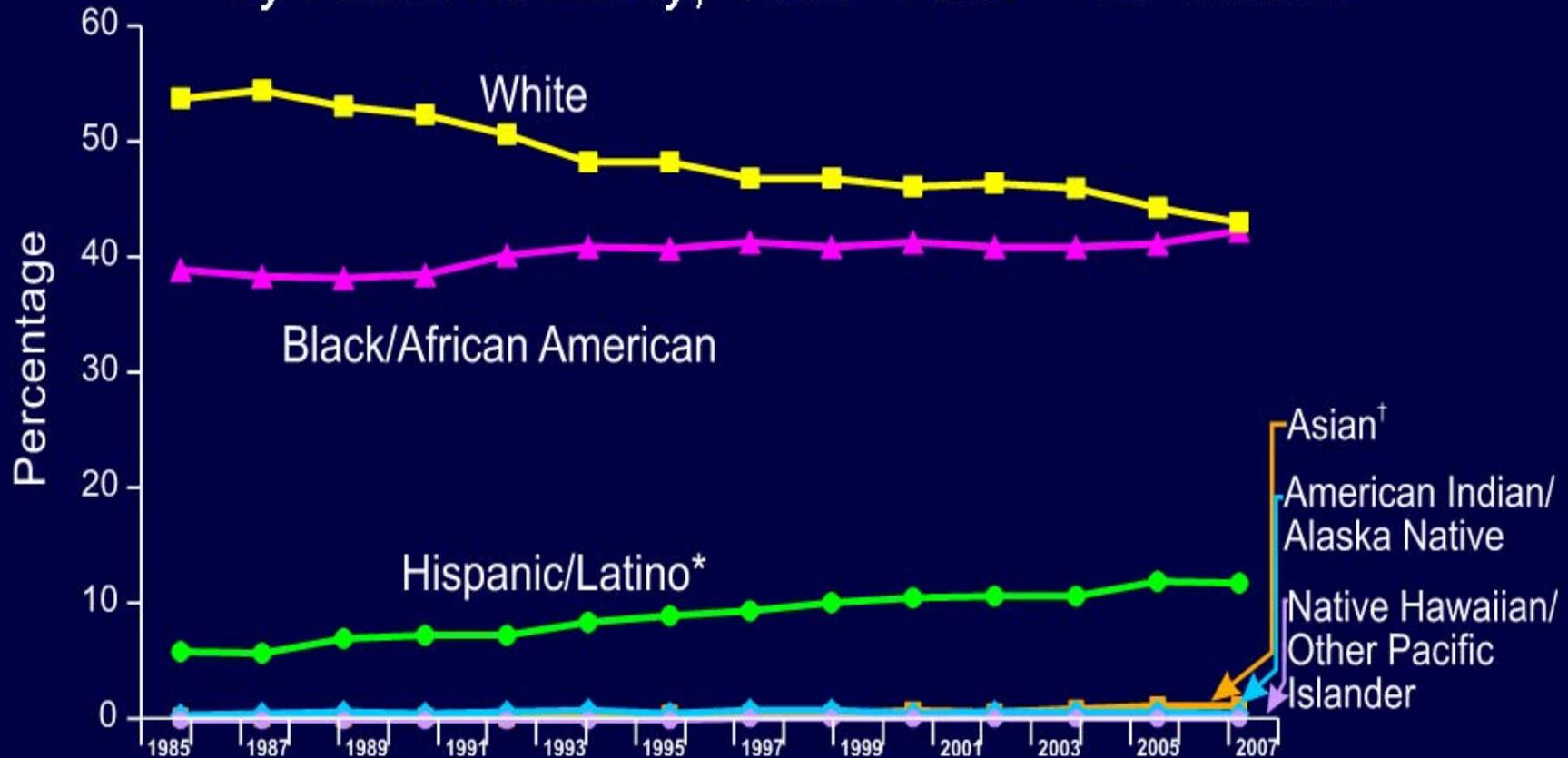
Today's Presentation

- HIV among MSM in Chicago
- How did we collect the data?
- HIV Prevalence Rates (how many are infected?)
- Rates of Unrecognized HIV Infection (do men who are positive know that they are?)
- What do differences by race/ethnicity mean?

HIV among MSM in Chicago

- 12,884 MSM living with HIV/AIDS in Chicago (as of 12/31/2008)
- Of 1,293 HIV cases diagnosed in 2008
 - 828 were among MSM

Percentages of Estimated HIV/AIDS Cases among Adult and Adolescent Men Who Have Sex with Men by Race/Ethnicity, 1985–2007—25 States



Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 25 states with confidential name-based HIV infection reporting since at least 1994. Data have been adjusted for reporting delays and missing risk-factor information. Data exclude cases among men who had sex with other men and injected drugs.

*Hispanics/Latinos can be of any race.

†Includes Asian and Pacific Islander legacy cases.



National HIV Behavioral Surveillance System (NHBS)

- CDC funded - began in 2004
- Ongoing national system to estimate:
 - HIV/STD risk behaviors
 - HIV testing behaviors
 - Exposure to HIV prevention
- Three primary populations (MSM, IDU, HET)
- Annual surveys repeated in 3-year cycles

Methods

- **Random sample** of men in MSM-oriented venues in Chicago
- Formative Research: January – July 2008
- Data Collection Period: August – December 2008
- Face-to-face interviews using handheld PC
- Orasure Oral HIV Test
- \$50 cash incentive to compensate for time

Recruitment Summary

- 57 randomly selected venues
- 1485 randomized approaches
- 1252 accepted intercept (84%)
- 710 agreed to screening (57%)
- 672 eligible (95%)
- 669 interviewed
- **570 MSM** (≥ 1 male sex partner in past yr)

Respondents by Venue Type

Venue Type	N	%
Bar/Lounge	233	41
Dance Club	113	20
Social Organization	82	14
Special Events	62	11
Sex Environments	32	6
Gay Pride/Community Events	26	5
Retail Shops	16	3
Street Corridors	6	1

Sample Characteristics

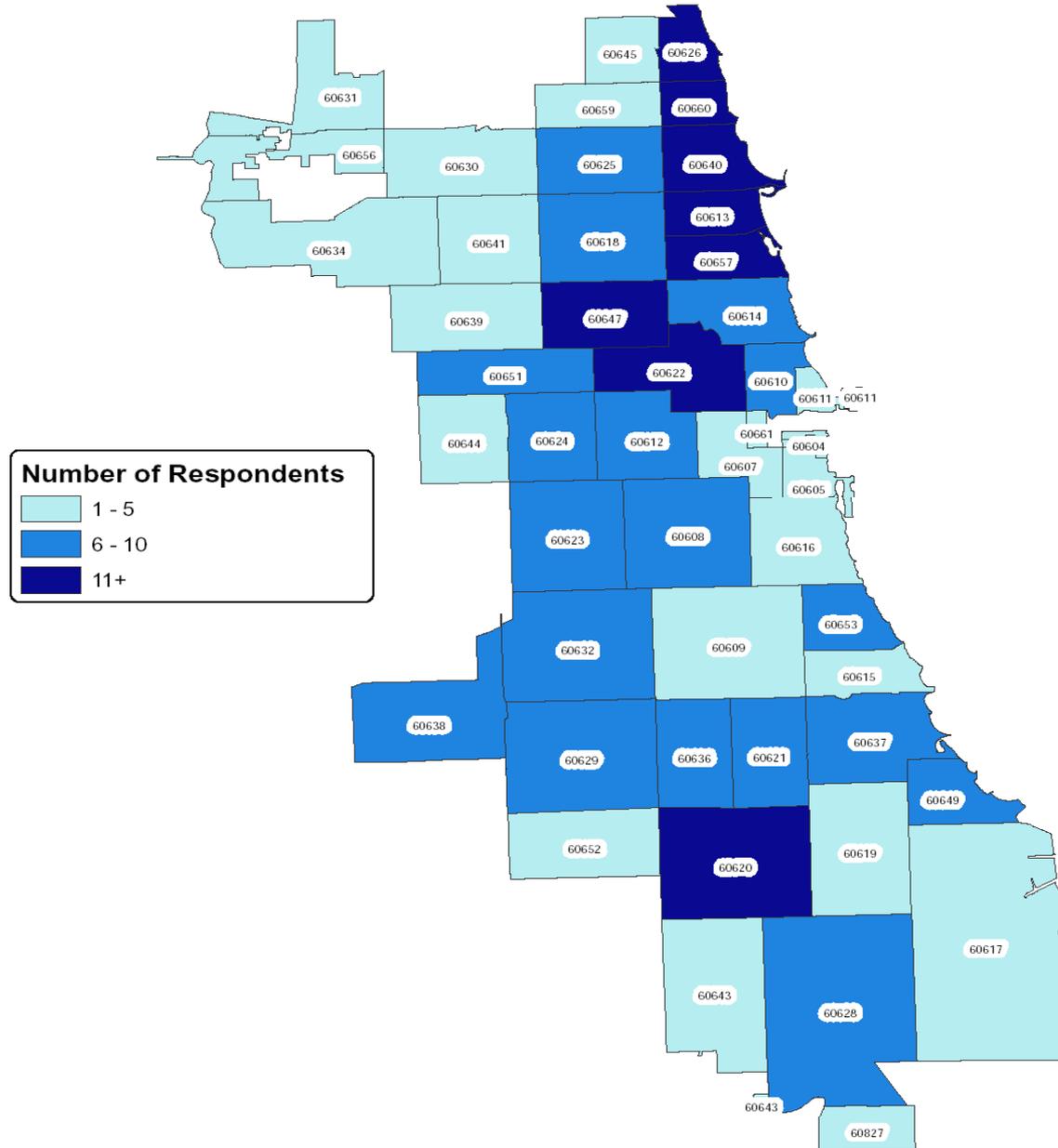
Demographics

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008		
	#	(%)
Race/Ethnicity		
Black	156	27
White	251	44
Hispanic	126	22
American Indian/Alaskan Native	2	<1
Asian	17	3
Native Hawaiian/Pacific Islander	1	<1
Other	16	2
Age		
18 — 24	152	27
25 — 34	206	36
35 — 44	148	26
45 — 54	51	9
55+	13	2
Annual Income (\$)		
0 - 19,999	155	27
20,000 – 49,999	213	37
50,000+	191	34
Highest Level of Education		
HS Grad or Less	131	23
Some College or Higher	438	77

Mean Age: 32 years

Black: 27 years
 White: 35 years
 Hispanic: 29 years

Respondent Zipcode of Residence (N=511) MSM2 HIV Behavioral Surveillance, 2008 Chicago Department of Public Health



Key Domains of NHBS Survey

- 30-minute survey
- Demographics
- HIV Testing History
- Sexual Behavior
- Substance Use
- HIV Prevention Utilization

HIV Testing

- Orasure testing conducted after survey
- 92% agreed to be tested
- 524 HIV Test results
- Results were available for pick-up at 6 clinics

HIV Prevalence

Chicago MSM, (CHAT 2008): 91 HIV+ / 524 Tested	17.4%
Heterosexuals at High Risk, (CHAT 2007) 14 HIV+ / 759 Tested	1.8%
Injection Drug Users, Chicago (CHAT 2005)	8 – 10%
Chicago Males-Gen Population (CDPH 2008 est.)	1.2%

HIV Prevalence

	Tested	HIV Positive	
Race/Ethnicity	#	#	(%)
Black	146	44	30.1
White	229	26	11.3
Hispanic	117	14	12.0
Age			
18 — 24	140	19	13.6
25 — 34	175	29	16.6
35 — 44	120	24	20.7
≥45	57	12	21.1

HIV Prevalence by Race and Age

	Total	HIV+	%
Black			
18-24	65	16	24.6
25-34	45	17	37.8
35-44	29	9	31.0
45+	6	2	33.3
White			
18-24	43	1	2.3
25-34	75	4	5.3
35-44	66	11	16.6
45+	45	9	20.0
Hispanic			
18-24	31	2	6.5
25-34	55	8	14.5
35-44	25	4	16.0
45+	6	0	0.0

HIV Prevalence by Race and Age

	Total	HIV+	%	
Black				
18-24	65	16	24.6	} 30.0%
25-34	45	17	37.8	
35-44	29	9	31.0	
45+	6	2	33.3	
White				
18-24	43	1	2.3	} 4.2%
25-34	75	4	5.3	
35-44	66	11	16.6	
45+	45	9	20.0	
Hispanic				
18-24	31	2	6.5	} 11.6%
25-34	55	8	14.5	
35-44	25	4	16.0	
45+	6	0	0.0	

Venues Sampled by Race/Ethnicity

Venue Type	Black	White	Hispanic
Bar/Dance Club	56%	65%	57%
Social Organization	22%	11%	10%
Promoted Events	6%	10%	21%
Sex Environments	2%	6%	8%
Gay Pride/Community Events	10%	3%	1%
Retail Shops	2%	4%	3%
Street Corridors	2%	1%	0%

Key Points – HIV Prevalence

- First time we have had population-based HIV prevalence rates among MSM in Chicago
- Impact varied across race/ethnic groups
- Racial disparity is greatest among MSM less than 35 years old

Key Points – HIV Prevalence

- Chicago rates and differences comparable to many other US cities (CDC, 2009)

HIV Sex and Drug Risk Behaviors

Sexual Risk Behaviors by Race/Ethnicity

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008 (excludes MSM with known HIV-positive status)			
	Black (n=112)	White (n=225)	Hispanic (n=112)
	(%)	(%)	(%)
Unprotected anal sex with a man - past 12 months	50	49	54
Don't know HIV status of most recent sex partner	38	26	36
Drug and/or alcohol use before or during most recent sex	40	39	43
Has concurrent sexual partners	38	39	43
# Male Sex Partners (median past 12 months)	3	3	3

Sexual Risk Behaviors by Race/Ethnicity

MSM less than 35 years old

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008 (excludes MSM with known HIV-positive status)			
	Black	White	Hispanic
	(%)	(%)	(%)
Unprotected anal sex with a man - past 12 months	50	52	55
Didn't know HIV status of most recent sex partner	36	23	32
Drug and/or alcohol use before or during most recent sex	36	36	46
Has concurrent sexual partners	44	42	38
# Male Sex Partners (median past 12 months)	3	4	2

Substance Use by Race/Ethnicity

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008			
Drug Use Behaviors (use past 12 months)	Black (n=131)	White (n=205)	Hispanic (n=109)
	(%)	(%)	(%)
Any illicit drug use	47	49	48
Polydrug Use	15	27	27
Club Drugs	0	4	1
Crystal Meth	1	6	5
Downers/Painkillers	2	8	5
Powder Cocaine	5	14	18
Poppers (Amyl Nitrate)	4	21	18
Crack Cocaine	3	2	5
Ecstasy	9	8	4
Marijuana	44	40	43

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Substance Use by Race/Ethnicity

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008			
Drug Use Behaviors (use past 12 months)	Black (n=131)	White (n=205)	Hispanic (n=109)
	(%)	(%)	(%)
Used any illicit drug before/during most recent sex	13	8	9
Marijuana and sex	12	4	5

Alcohol Use by Race/Ethnicity

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008			
Alcohol (use past 12 months)	Black (n=131)	White (n=205)	Hispanic (n=109)
	(%)	(%)	(%)
Don't Drink	10	3	5
5+ drinks/once a week+	22	37	43
Alcohol w Most Recent Sex	36	38	42

Key Points – Sex/Drug Risk Behavior

- About half of Chicago MSM engaging in unprotected sexual behaviors
- MSM are not routinely discussing HIV status with their sex partners
- Many MSM are in concurrent sexual relationships
- Drug and alcohol use before or during sex common among MSM
- Drug use patterns differ by race/ethnicity

Key Points – Sex/Drug Risk Behavior

- About half of Chicago MSM engaging in
- However, sexual and drug use risk behaviors do not seem to readily explain racial disparities in HIV prevalence
- Drug use patterns differ by race/ethnicity



Unrecognized Infection:

How many did not know they
were HIV positive?

Unrecognized Infection

Tested HIV-Positive at survey

-and-

Reported most recent test result
Negative or Never tested for HIV

Unrecognized Infection by Race

Chicago HIV Behavioral Surveillance Men Who Have Sex With Men (2008)			
	Total HIV+	Unaware of HIV	%
Black	44	29	66
White	26	6	23
Hispanic	14	7	50
TOTAL	84	42	50

Unrecognized Infection by Race

Chicago HIV Behavioral Surveillance Men Who Have Sex With Men (2008)			
	Total HIV+	Unaware of HIV	%
Black	44	29	66
White	26	6	23
Hispanic	14	7	50
TOTAL	84	42	50

HIV Testing and Health Behaviors by HIV status and Unrecognized Infection

HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008		
	Unaware HIV+ (n=42)	NHBS HIV Negative (n=433)
	(%)	(%)
Ever tested for HIV	88	92
2+ HIV tests in past 2 years	61	67
Currently Insured	60	72
Seen a health care provider in past 12 months	82	79

Main Reason No HIV Test in the Past Year Among those with Unrecognized Infection (n=17)

Main reason	Unaware HIV+
Afraid of Finding Out Result	41%
Think I'm Low Risk for HIV	35%
Afraid of Needles	12%
Didn't Have Time	6%
Worried Name Would Be Reported to Government	6%
Didn't Know Where to Get Tested	0%

Main Reason No HIV Test in the Past Year Among those with Unrecognized Infection (n=17)

Main reason	Unaware HIV+
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Sexual Risk Behaviors by Race/Ethnicity MSM Unaware of HIV Infection

Chicago HIV Behavioral Surveillance System Men Who Have Sex with Men, 2008 (n=42)			
	Black	White	Hispanic
	(%)	(%)	(%)
Unprotected anal sex with a man - past 12 months	59	67	43
Didn't know HIV status of most recent sex partner	59	33	43
Drug and/or alcohol use before or during most recent sex	31	33	43
Has concurrent sexual partners	41	67	29
# Male Sex Partners (median past 12 months)	3	3	2

Re-thinking Unrecognized Infection

Among HIV+ MSM Unaware of their Infection (n=42)

Infected in past 12 months:

Black	(20/29)	66%
Hispanic	(4/7)	57%
White	(2/6)	33%

Total	(26/42)	62%

Key Points – Unrecognized Infection

- 50% of HIV+ MSM were unaware of their infection at the time of the survey
- Those unaware of their HIV status are testing and seeking health care at nearly the same rates as other MSM
- Data suggest that many Black MSM infections are very new

Key Points – Unrecognized Infection

For those who are not testing regularly:

- Fear may be a barrier to HIV prevention activities
- Self-perception of risk may be an issue



HIV+ MSM Who Know Their Status

Men Aware of Their HIV Infection Who Have Sex With HIV-Negative Men

	Black (n=15)	White (n=20)	Hispanic (n=7)
	(%)	(%)	(%)
Most Recent Sex Partner HIV-Negative	53	50	57
With most recent sex:	(n=8)	(n=10)	(n=4)
Unprotected anal sex	13	30	50
Drug and/or alcohol use before or during sex	38	70	25
Concurrent sexual partners	25	50	50

Men Aware of Their HIV Infection Who Have Sex With HIV-Negative Men

	Black (n=15)	White (n=20)	Hispanic (n=7)
	(%)	(%)	(%)
Most Recent Sex Partner HIV-Negative	53	50	57
With most recent sex:	(n=8)	(n=10)	(n=4)
Unprotected anal sex	13	30	50
Drug and/or alcohol use before or during sex	38	70	25
Concurrent sexual partners	25	50	50

HIV Care among HIV+ MSM Who Know Their Status

	% Seen a Doctor for HIV Infection	% Currently Taking ART
Black (n=15)	100	43*
Hispanic (n=20)	86	83
White (n=7)	100	79

*Among persons with new diagnoses, ART initiation is often delayed

Explaining Disparities

- Traditional Risk Factors That Fail to Explain Disparities:
 - Condom Use
 - Number of Sex Partners
 - Substance Use
 - Sex risk behaviors of HIV+
- Overall, traditional risk factors seem limited in explaining the magnitude of the racial disparities

Explaining Disparities

Other Explanations:

- Role of New Infections?
- Background Community Prevalence?
- Network Explanation?

Recent Diagnoses and Infection

- **55%** (24/44) of all HIV+ Black MSM were either recently diagnosed or recently infected (in the past year)
- Compared to:
 - **15%** (4/26) of White HIV+ MSM
 - **36%** (5/14) of Hispanic HIV+ MSM

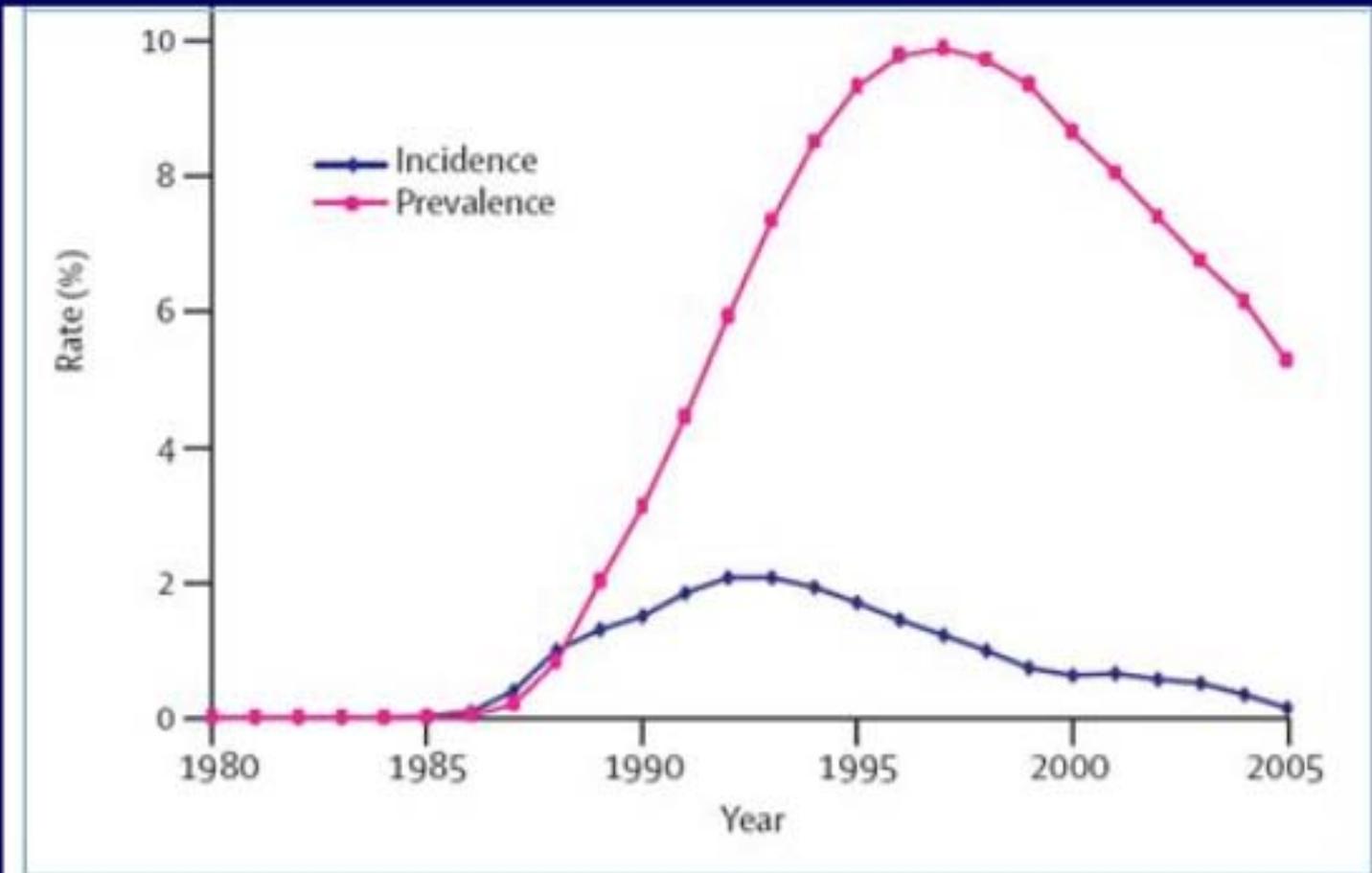


Figure 1: HIV incidence and prevalence in Kenya in people aged 15-49 years old²

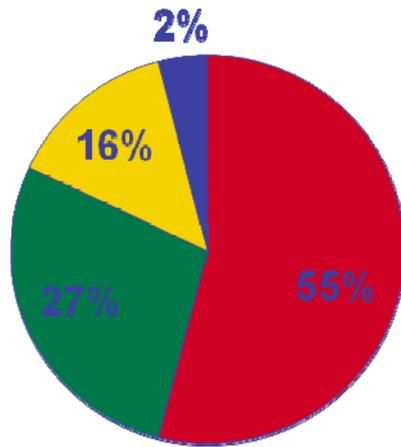
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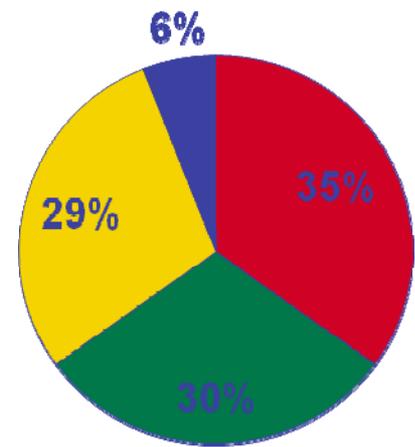
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People Living with HIV and/or AIDS in 2008 by Race/Ethnicity, Chicago, as of 12/31/08

Living with HIV/AIDS



Chicago 2006 Population



■ NH Black ■ NH White ■ Hispanic ■ NH Asian

■ NH Black ■ NH White ■ Hispanic ■ NH Other

MALES AND FEMALES - ALL RISK GROUPS

Explaining Disparities

Other Explanations:

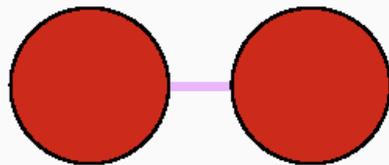
- Timing?
- Overall Community Prevalence?
- Network Explanation?

Network Explanation

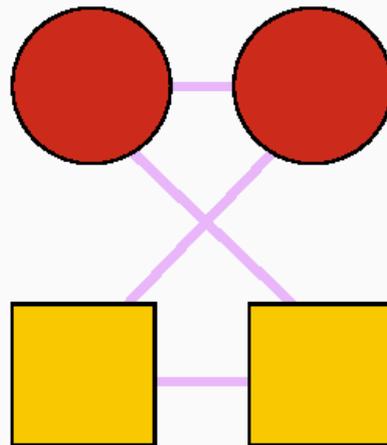
Location, Mobility and Size of MSM Sexual Networks may limit or enhance factors such as:

- Sex partner availability
- Risk profiles of available sex partners
 - Methods of selecting partners
 - Types and availability of venues

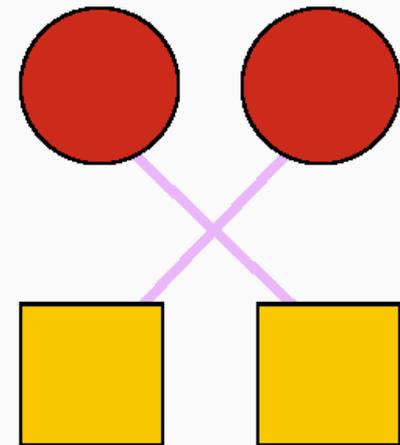
Explaining Disparities



Assortative

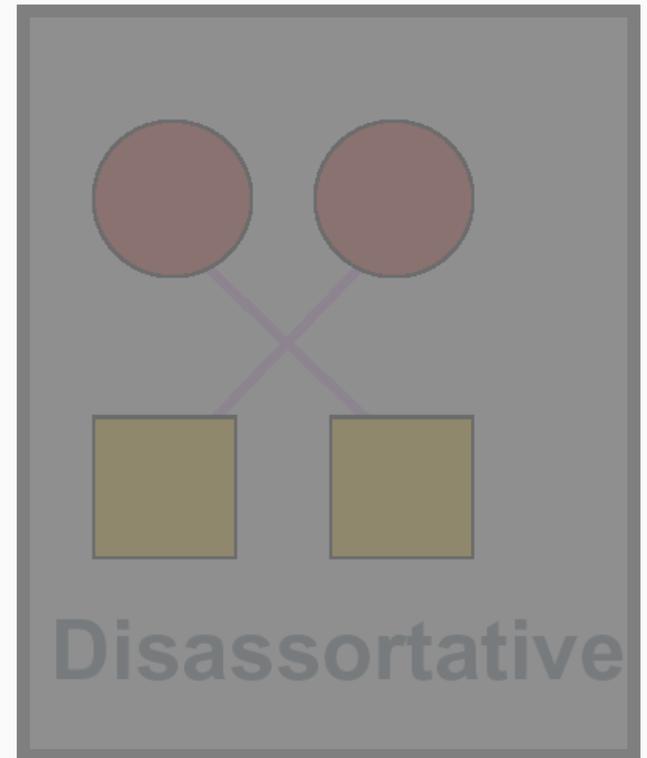
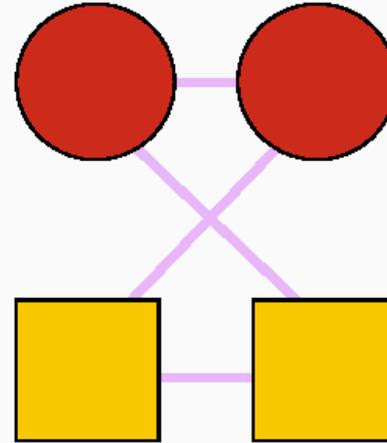
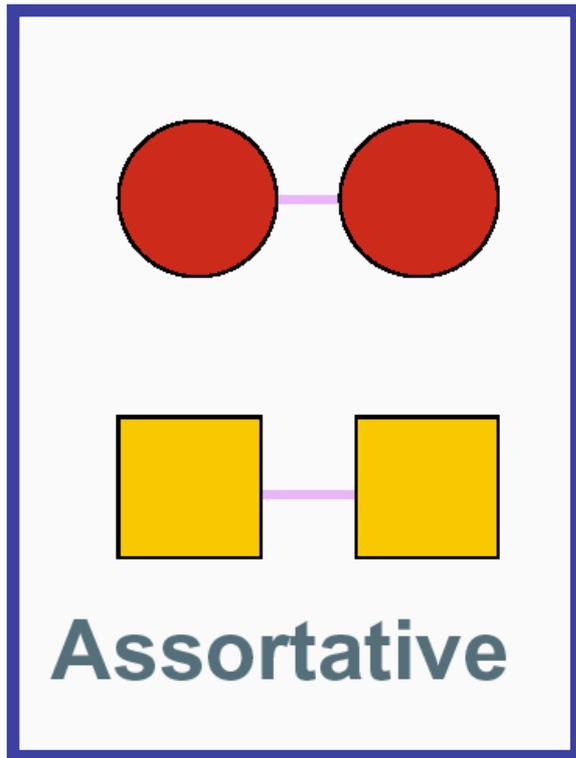


Random

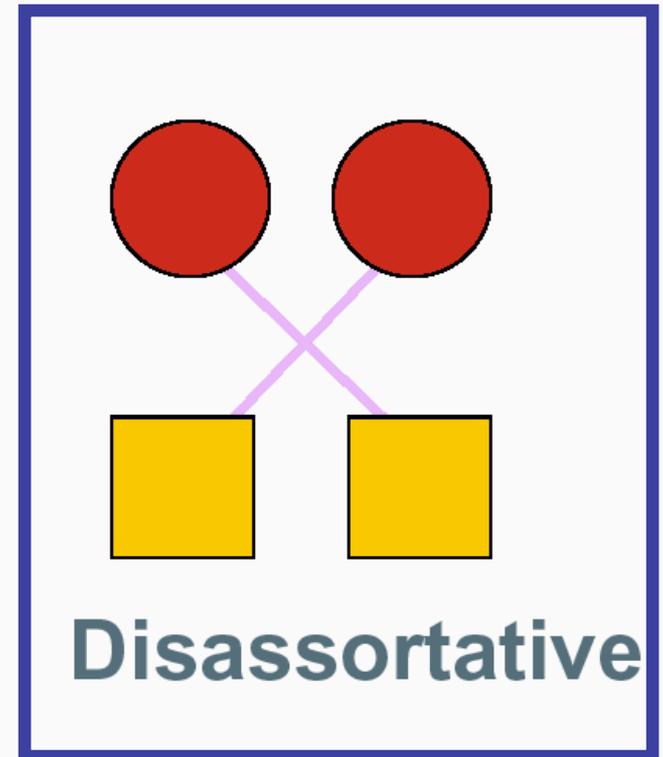
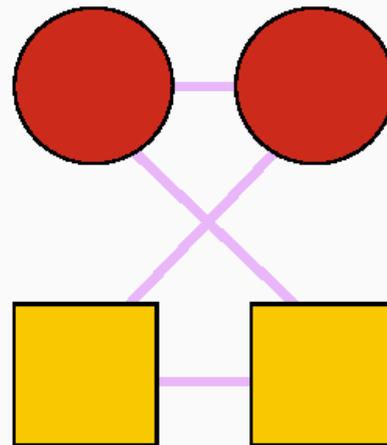
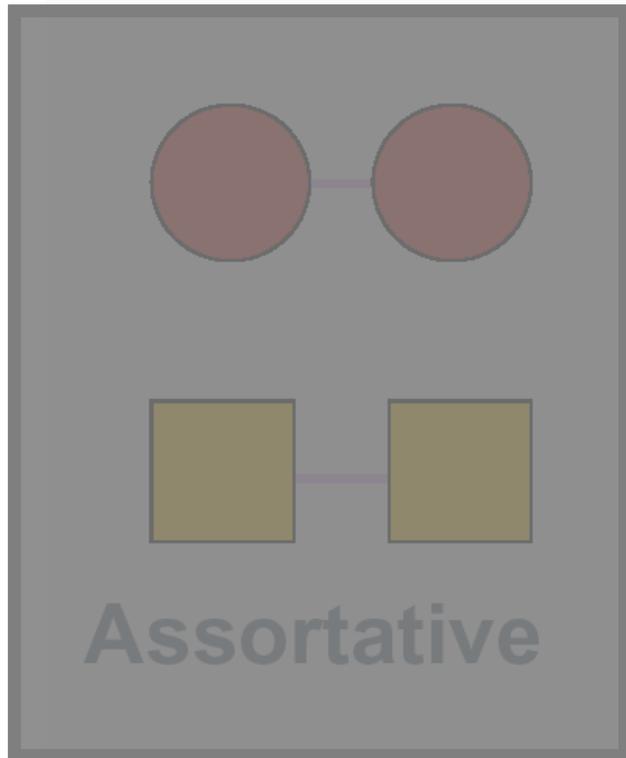


Disassortative

Explaining Disparities



Explaining Disparities



Explaining Disparities

Other Explanations:

- Broader Contextual Factors
 - Poverty (Income, Education, Employment)
 - Access to Healthcare/Medications
 - Racism/Segregation
 - Stigma/Homophobia
 - Social Support
 - Psychological Health/Self-Esteem

Limitations of NHBS

- Data may not be generalizable to all Chicago MSM
- All behavioral data was self-reported
- Data may be subject to selection biases
- Certain important subgroups of MSM were harder to sample
- Small sample sizes should be interpreted cautiously

Conclusions

- Major Findings
 - Overall HIV Prevalence among MSM: 17.4% (1 in 6)
 - 30% of Black MSM tested HIV+ compared to 11% of White MSM and 12% of Hispanic MSM
 - Greater disparity among Younger MSM (<35 yrs)
 - 7-fold difference between Younger Black and White MSM
 - Traditional risk factors do not sufficiently explain the disparities

Conclusions

Major Findings

- 50% of HIV+ MSM unaware of their infection at the time of their survey (67% of HIV+ Black MSM)
 - Most Black MSM who 'did not know' are regular testers and were infected very recently
- Data suggests that rates of new HIV infections among Black MSM in Chicago may be higher than White or Hispanic MSM

Conclusions

- YOU should use this information to raise awareness of current HIV infection rates among your constituents and sound a louder, broader call to action

Recommendations

- Continued emphasis on risk behaviors and testing will have only limited impact on the disproportionate rates of HIV infection

Recommendations

- Future interventions should address:
 - the community beyond MSM
 - how to increase routine testing
 - fear and complacency
 - role of 'low risk' drugs
 - diffusing prevention through sexual networks
 - how MSM select partners and venues
 - developing social spaces for young Black MSM

- expanding biomedical interventions like PrEP, and microbicide development

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